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ABSTRACT

This annual serial issue contains six papers dealing with business education and training. "A Direction for Focusing Business Curricula" (Sharon Lund O'Neil) discusses the standards against which business curricula of the future must be measured. The importance of business communication in general education programs is emphasized in "The Nature of Business Communication: The Integration of Theory and Practice" (Iris I. Varner, Paula J. Pomerenke). "Perceived Importance of High School Business Classes as Preparation for College" (Linda Henson Wiggs, Simin Cwick) reports a study of college students' perceptions regarding the importance of high school business courses as preparation for college. In "Creating Computer-Based Presentations: A Skill for Today's Workplace" (Heidi R. Perreault), the capabilities and use of presentation software packages are explained. "The Spacing Effect: What Is It? And How Can It Impact on Your Business Curriculum?" (Dennis J. LaBonty) summarizes research on the spacing of instruction over several days rather than presenting it in a single day. Evidence that professional development activities are needed to make teaching more relevant to industry-based skill standards is provided in "Incorporating Industry-Based Skill Standards into High School Secretarial and Administrative/Information Services Programs: Teacher Professional Development Activities" (Phyllis C. Bunn). (MN)

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Volume 5, Number 1
1996

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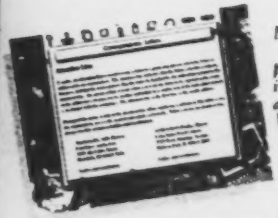

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EDITOR'S NOTES . . .

The members of the Louisiana Association of Business Educators voted in 1995 to change the title of our Journal from the Louisiana Business Education Journal to the Journal of Business and Training Education, and to adopt a national focus. This newly-named Journal will be listed in the next issue of both Cabell's Directory of Pubishing Opportunities in Management and Marketing and Cabell's Directory of Publishing Opportunities in Education.

With the exception of invited articles, the manuscripts presented in this issue were accepted under a blind review process. Each was read by three reviewers from the Journal's editorial review board.

This fifth issue of the Journal contains articles on a wide variety of topics, beginning with an invited paper by Sharon Lund O'Neil, the 1993-1994 National President of Delta Pi Epsilon. Dr. O'Neil proposes a direction for focusing the business curricula of the future. She offers several standards against which to measure how well business educators develop and deliver our business education curricula for the future. Dr. O'Neil challenges us to be proactive in forging change instead of being reactive to change.

The thesis of the second article, by Iris I. Varner and Paula J. Pomerenke, is that business communication is an important part of general education. The emphasis of the authors' discussion is on the three challenges that students will encounter frequently in their careers: to identify and solve problems, to use information effectively and ethically, and to function in an increasingly diverse and global environment. The authors provide sample assignments for each of these challenges.

Business education as well as other vocational programs have experienced a decrease in high school enrollments due to increases in required academic courses which leave less room for electives. In the third article, Linda Henson Wiggs and Simin Cwick provide support for the argument that business education classes should be included as part of the college prep curriculum for those students who plan to major in business. The authors report on their study to determine the influences on choice of a college major and the perceptions of college

students about the importance of high school business courses as preparation for college.

The Secretary's Commission on Achieving Necessary Skills (SCANS) lists using technological tools as one of the competencies needed by all workers. In addition, the SCANS Report stresses the importance of communication skills, team work, and decision making. In the fourth article, Heidi R. Perreault illustrates how these competencies plus creativity can be incorporated into the curriculum when teaching presentation software. Dr. Perreault discusses the types of investments in both software and hardware that educators will have to make if they wish to provide students with the opportunity to develop computer-based presentation competencies.

To enhance students' retention abilities, Dennis J. LaBonty, offers business education teachers an instructional strategy, the spacing effect, that has been proven in several research studies to be effective. The spacing effect is a technique that applies instruction over a period of time as opposed to mass instruction given all in one day. Dr. LaBonty's articles provides useful information drawn from the five research studies examined.

Due to the challenges of globalization, business and education leaders in the United States have acknowledged the interdependence between education and the economy, including workforce preparation. In the last 15 years, several occupational standards have been developed, such as the SCANS Report. In the last article, Phyllis C. Bunn examines the extent to which business teachers incorporate skill standards into the curricula. She also examines teachers' training and retraining to keep up-to-date with current national office occupational skills used by business and industry.

Sincere thanks is extended to all authors for their professional contributions to this issue. Appreciation also is extended to the editorial review board and associate editor, Betty Kleen. Acknowledgement must be given to Sandra Cash of Louisiana State University for her patience in keying the Journal. Sincere appreciation goes to our advertisers for their support.

Donna H. Redmann, Editor

JOURNAL PROFILE

Journal Description

The Journal of Business and Training Education is a national refereed publication published annually by the Louisiana Association of Business Educators. This refereed journal includes articles on various aspects of business and training education dealing with research, theory, trends and issues, curriculum, teaching methodology, technology, and personal/ professional development. Manuscripts are selected using a blind review process. Each issue contains approximately six to ten articles,. The first issue of the journal was circulated in Spring 1991. Volumes 1 - 4 were entitled Louisiana Business Education Journal (available in the ERIC database).

Circulation/Readership

The journal is distributed to all LABE members as part of membership dues and sent free of charge to the NABTE (National Association of Business Teacher Education) institutions throughout the country. The readership is comprised of business teachers, administrators, supervisors, teacher educators, college and university students planning to become business teachers or trainers, and trainer in business & industry.

JOURNAL SUBSCRIPTION

Subscription is part of LABE membership dues. Subscription rates are $10 for both non-LABE members and for institutions/ libraries. For a subscription, please make your check payable to **LABE** and mail it to the editor at the following address:

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CALL FOR PAPERS

The Louisiana Association of Business Educators invites business educators and trainers to contribute articles for publication in the Journal of Business and Training Education, a national refereed publication. Manuscripts should deal with topics of interest to educators (at both the secondary and post-secondary levels) and to trainers in business and industry. Submission of manuscripts dealing with practical topics are encouraged, as are research based or theoretical papers. Occasionally, invited authors' papers will be published. Book reviews are also accepted.

Manuscripts will be selected through a blind review process. Manuscripts should not have been published or be under current consideration for publication by another journal. **Five copies** of the manuscript, including a title page and a 50-100-word **abstract**, should be submitted to the editor. The manuscripts should range from 6 to 15 double-spaced typed pages of 12 pitch type-size, including tables and references. Manuscripts must be prepared using the style format in the Publication Manual of the American Psychological Association, Fourth Edition, 1994 (ISBN 1-55798-241-4). The **title page** is to include the title of the manuscript and the running header. The following information on each author needs to be included on the title page: full name, position title, place of employment, city, state, zip code, telephone numbers and e-mail if available.

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Journal of Business and Training Education
Vol 5, No. 1, 1996, pp. 13-21.

A DIRECTION FOR FOCUSING BUSINESS CURRICULA

Sharon Lund O'Neil

Abstract

Business curricula of the future must be able to be measured against several standards. These standards include a) assuring business educators become major shareholders in fostering change, b) achieving an instruction balance in all programming, c) continually evaluating and benchmarking our programs, d) identifying and teaching the essential career mobility skills, and e) expanding our paradigms to encompass the growing global, competitive, technological, and information-saturated society.

Business educators can have a prominent place in developing and delivering curricula at all levels and in many environments if we are receptive to the many challenges that face society. If we focus on the challenges, we will soon rise above merely reacting to change and will become adept in providing the leadership to forge change which will assure a bright future for business education.

Dr. Sharon Lund O'Neil is a Professor and Associate Vice Provost for Academic Programs at the University of Houston, Houston, Texas, and was the 1994-1995 national President for Delta Pi Epsilon, the National Honorary Professional Graduate Society in Business Education.

In the wonderful fairy tale, *Alice's Adventure in Wonderland,* there is a perfect answer to the question, "How do we focus our business education curricula for the future?" You will recall from the story that "any old road" will get you there if you don't know where you want to go. Similarly, the strength of our future business curricula lies in knowing where we are headed and taking definitive action in that direction.

Several questions must be answered to have assurance that we really know the direction we should be taking:

- Are we merely responding to change or do we actively foster it?
- How do we measure our teaching effectiveness?
- Do we evaluate our curricula based on workplace needs?
- Have we focused enough attention on vital career skills?
- Are we building on obsolete or future-oriented paradigms?

Here are several of the elements that are important in answering each of these five questions.

Shareholders in Fostering Change

Promoting the "business as usual" concept is no longer appropriate in our internationally competitive world of flux and change. Change has nearly become a constant with business curricula. Most business teachers have made significant curriculum modifications to reflect change, especially as change relates to the continuous developments and advancements in technology. But do we really understand what change means for our future?

Change for every business teacher must go well beyond the fact that our curricula content is based on *responding* to

change. It is essential that we become much more proactive and be influencers of change. One absolute essential in becoming a change agent is the degree of success we can achieve in creating strong alliances with business.

Business educators must take responsibility for actively forming working relationships with business and not wait for industry to come to us. Because most partnerships are built on reciprocity, the degree to which each partner contributes to a relationship is equal to the total net worth of the partnership. That is, industry must value business educators as partners because we have something significant to offer to them. We must identify ways to become major stakeholders in society, becoming business partners who are future-oriented, who understand the bottom line, who know when to let go of old and outdated content, and who know how to help others to accept and foster change.

Thus, while it is vital to keep up with technology, we also must keep pace with identifying the paths and the goals that are important for our future--a future of many diverse elements. This takes continuous evaluation of the changing elements, then planning instruction by identifying appropriate instructional content, determining the best techniques for delivery, and assessing the effectiveness of our instruction.

The Instructional Balance

Promoting instructional effectiveness has become a delicate balancing act. Planning, designing and delivering timely, relevant instruction is not an automatic nor easy task. Because the instructional techniques we use today are and should be driven to some degree by technology, there are additional challenges for both teachers and students.

Technology has given us many tremendous tools to accomplish work in efficient and timely ways. While we need

to use and teach these tools, we must be cognizant of the delicate balance that is needed to provide our students with the best preparation they can get to survive, let alone advance, in a competitive and productivity-oriented marketplace. All workplace elements, including the development of good communications and human relations skills, must be weighed in the instructional balance. An imbalance in curricula is just as crucial as an imbalance in teaching strategies.

Certainly the literature is replete with examples of exemplary teaching strategies and sound learning practices. One very popular and effective instructional strategy that deserves mention here is accelerated learning. Accelerated learning techniques promote active involvement of the learner and include strategies which make learning interesting and enjoyable. These "action" techniques include the use of associations, fables, multi-sensory learning, and thoughtful problem-solving experiences.

Active learning or "doing" activities have been found to be about 40-60 percent more effective than more passive types of activities such as listening to a lecture or reading an assignment. This, in no way, implies that we should place less emphasis on listening and reading skills, but we must optomize learning by focusing on active learning. Frequently it is more efficient to tell our learners what to do than to have them actively involved in experiencial learning activities.

While we must be concerned with how much time is devoted to various segments of learning, it is important to be concerned with how well our students are able to apply their knowledge. Thus, implementing active, hands-on instruction whenever possible should be foremost in our classroom instructional management plan.

Evaluation and Benchmarking

Evaluation and benchmarking are two vital elements that must be present in every business education classroom. Business teachers must accept the need for continuous evaluation as a process that is integrated into everyday classroom practices--and life, for that matter. While a final assessment of student work may be required (probably because of being grade-driven by our traditional settings), evaluating student processes and learning along the way is much more logical. Continuous assessment also is much more closely aligned with industry practices.

Business teachers can create an effective environment for continuous evaluation if we are be willing to subject ourselves to the process. We must be willing, however, to learn to "benchmark" everything we do. That is, as we question our students about the concepts and applications we teach (to assure learning is taking place), we also must question our own practices, procedures, instructional content, evaluative processes, etc.--every single day--and subject our answers to the highest possible standards.

As we accept and become more effective evaluators, benchmarking should become a natural outgrowth for business teachers. This is not to imply that benchmarking happens by accident--quite the contrary. To implement an environment of continuous improvement where we measure all our practices and processes against the toughest competition is only a first step. The goal should be to **become** our own "toughest competition". If business educators can become proactive change agents who set worldclass competitive standards for ourselves, we will become recognized leaders and true facilitators in the continuous process of quality improvement.

An important element in the quality improvement process for business educators is to be sure we understand the needs of the potential employers of our students. Industry is crying for qualified employees who have skills that form the roots of business instruction. Because knowledge application is absolutely vital in the workplace, it is becoming increasingly important for every student to learn and practice good decision making and problem solving skills. Good decision making skills are directly related to thinking skills, inquiry skills, research skills, and assessment skills. Assessment and evaluation skills also need particular attention if students are to excell in decision making.

Assessment and evaluation skills must be both product and process oriented. As a vital part of benchmarking, these skills are needed to assure quality control of both products and services. If workers have an understanding of the importance of their nitch in the organization, they should be more successful in contributing to the mission of the organization. They also need to know what alternatives can or cannot be taken to assure the end result will be appropriate or possibly whether or not a task even can be accomplished.

Effective workers in a changing workforce require that students learn how to identify the intended end result near or at the problem identification stage. If end results are considered at all levels of problem solving, alternatives can be selected and rejected on the basis of being plausible solutions to the problem. One's thinking and decision making skills are sharpened as more alternatives are considered for solving problems.

Learning and practicing inquiry and research skills also will enhance one's assessment and evaluation skills. With nearly unlimited information resources available to us today, there is little excuse for not having the right information at the right time. It is, however, imperative to learn selective sorting

techniques for information access and acquisition--and, obviously, there is a certain practicality in having information organized. Developing good research skills (that is, learning to access, sort, and select information in a timely and efficient manner) is a valuable asset to anyone--and comes with practice.

Essential Career Mobility Skills

By the year 2000, most workers will need a variety of career mobility skills to permit them to make the three to four career changes they will be forced to make in their working lifetimes. Vital career mobility skills include communication skills which can be applied in a global and diverse society, flexibility, accepting and adapting to change, proactively seeking out the unknown, and "learning to learn" skills. To foster and teach these skills, we must have these skills ourselves. Thus, as business teacher-facilitators, we must be excellent role models--practicing what we preach and continuously seeking for improvement of our own skills. We can and must motivate our students to help themselves so they can work toward the most important goal in life: to be the very best they can be.

Learning requires that we know how to acquire knowledge. And never before has it been so important to learn how to be information seekers and end-users. In fact, the majority of jobs in our nation, nearly 55% of them, are held by people who are classified as information workers or end-users. Most information workers in the services-oriented age in which we live must be able to access, sort, and select information; compile and present the facts; and disseminate the results for informed decision making to take place.

If our own "learning to learn" skills are developed to their fullest, we not only will be good information end-users, but we will be in an optimum position to teach our students to become

good information end-users. Developing good "learning to learn" skills also will improve other skills such as communicating skills; negotiating, thinking, and decision making skills; empowerment and leadership skills; risk taking; and interpersonal skills. Thus, "learning to learn" must be a baseline skill along with reading, writing, and computer skills.

Today, many career mobility skills, including several of those already mentioned, are life skills. Early skill training is becoming more and more important to our society to reach our increasingly diverse populations. It is crucial to capitalize on "learning to learn" skills very early in life. No doubt, business educators can impact this major American challenge in helping students develop "learning to learn" and other vital career mobility skills.

Paradigm Expansion

The paradigms or rules and patterns which either we impose on ourselves or are imposed on us by others affect our personal growth and professional development. Personal growth and professional development not only are healthy, but they are essential to our survival. To grow in one's life and career requires receptiveness to knowledge. Building a knowledge base frequently is sequential, adding one experience after another to provide direction over time. New experiences usually alter some part of our factual base; thus, knowledge receptivity is directly proportional to how well we can adapt to and move with changing our knowledge base.

We must not let our paradigms stand in the way of moving with and fostering change. How well we are able to evaluate, build, alter, or even completely change our paradigms will influence how much and how fast we learn. It is important to build on our paradigms rather than trying to ignore them or to throw them out completely. However, if we never let go of

some of our "old" paradigms and replace them with new ones, we will seriously jeopardize our ability to learn.

Evaluating ideas, even if they are on the edge of "non-acceptance," can be extremely worthwhile. In fact, if we don't explore and seek out new and better ideas, stagnation will set in quickly because learning does not take place in a vacuum. We cannot afford to let our paradigms stand in our way of exploring change and expanding our learning. However, we can capitalize on learning only when our ability to accept and build on updated paradigms parallels the rapid pace of our global, competitive, technological, and information-saturated society.

Focusing Our Challenges

Focusing our business curricula for the future will take effort--and lots of it by each one of us. It requires change and daily evaluation of our instructional effectiveness. It requires assessment, evaluation, and benchmarking. It requires that we develop and refine of many other career mobility skills. It requires that we become proactive and that we develop meaningful partnerships with industry.

Undoubtedly we must continuously assess where we are going to assure that we are "on the right road". Together, we can focus business curricula not only to meet the needs of society, but to drive positive change in the workplace. The direction is up to us.

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THE NATURE OF BUSINESS COMMUNICATION: THE INTEGRATION OF THEORY AND PRACTICE

Iris I. Varner
Paula J. Pomerenke

Abstract

Business communication develops the ability to think analytically and to apply that knowledge, abilities that general education seeks to develop in students. Business communication contributes to the goal of the successful person of the 21st century--to identify and solve problems, to use information effectively and ethically, and to function in an increasingly diverse and global environment.

The thesis of this article is that business communication is an important part of general education because it can integrate knowledge from a variety of areas. The focus of the discussion is on three challenges that students will encounter frequently in their careers: to identify and solve problems, use

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information effectively and ethically, and function in an increasingly diverse and global environment. Following the discussion are sample assignments for each challenge.

Identifying and Solving Problems

The analysis of the situation lays the groundwork for effective decision making and the communication of that decision in business. A thorough and objective analysis requires knowledge and experience and lends credibility to the argument. In recognition of the importance of this step, more textbook authors are discussing definition and analysis of the problem (see Bowman & Branchaw, 1988; Driskill, 1992; Locker, 1992; Varner, 1991).

Before writing or speaking, students must analyze each situation thoroughly. They must ask, "What are the specific circumstances I have to consider?" and they must answer that question for every communication assignment. They must look at the symptoms, weigh conflicting information and evidence, and peel away the layers of extraneous information to get to the core of the problem. This stage of the communication process-*invention*--is critical to the success of the resulting speech or document.

Composition scholars, such as Edward P.J. Corbett, revived the belief from classical times "that writing cannot be separated from its context, that audience and intention should affect every stage of the ... process" (cited in Hairston, 1982, p. 22). For example, according to Selzer, good business communication courses "will introduce students to new invention techniques which will reinforce reading, interviewing, observing, and surveying" (Selzer, 1983b, p. 12). Business communication, therefore, does not encourage the acquisition of isolated skills but builds on the knowledge gained in other areas and encourages students to expand their knowledge in those areas.

As students analyze situations for business communication, they will also be concerned with how to solve problems. As a result, they will see that the analysis, the research necessary to solve a problem, and the act of communicating a solution to a specific audience are a unit rather than disjointed and unrelated parts.

As they search for solutions to the problem, students will gain experience in stating and testing hypotheses. The formulation of the hypothesis is based on the classical *inventio;* it also requires the application of the scientific approach to problem solving (Selzer, 1983a). Because business reports must serve the needs of the organization, the writer must check and recheck that the conclusions and recommendations logically follow the analysis and that the analysis is based on facts.

Throughout the preparation of their reports, students must think through the ramifications of their analysis and recommendations. They also learn to examine hypotheses and probabilities. In that process they will ask, "What happens if?" They must reason, analyze, and examine the evidence to make their recommendations, to decide on the organization of the material and the appropriate level of formality and style. In analyzing problems and testing hypotheses and solutions, students learn that business communication is a practical art combining theory and practice. The planning, writing, and revising of a document or speech go hand in hand with the analysis, research of a business problem, and the solution to that problem. (See Suggestions for Assignments at the end of this article.)

Using Information Effectively and Ethically

In statistics students learn about regression and ANOVA, in mathematics they master calculus, in accounting they master the language of business, but it is in business communication

where they, often for the first time, must apply this knowledge to a specific and realistic situation and communicate technical information for a variety of purposes. No textbook will tell them what to do in a particular situation. All they know is that they have the data, they have the computer printout with the results, and now they must communicate this information to the boss, a hostile group of supervisors, sales people, or the government. They must learn to organize, explain, and persuade in the process of applying their theoretical and technical expertise.

The use of information must be based on principles of ethics. When business communication instructors teach "students to present a process of deliberation and judgment . . . [they are] teaching students to engage in a moral, and difficult, activity" (Garver, 1985, p. 63). In this process, instructors are responsible for seeing that students master the principles of business communication and develop a sense of responsibility in applying them in all their business courses. The understanding of the principles may not be so difficult, but the appropriate application raises all sorts of concerns. For example, although students may understand that audiences need to be persuaded with particular evidence, they must decide when a particular organization of material is an ethically legitimate means to get a point across, and when it is a means to mislead and camouflage the truth.

To reinforce the ethical dimension of business communication, instructors should emphasize that business communication does not merely teach some rules on being objective but can help in the development of virtue and ethics. Since business communicators weigh evidence and consider audience in their choice of language, the ethical aspects of discourse are ever present, not just tacked on as an afterthought. Students must think critically and analyze the situation. The development of that ability is an integral part of general education.

It is one thing to know in the abstract what is right and wrong; it is something else to use that knowledge in a business situation and act on one's convictions. Business communication provides a unique opportunity to help students develop a sense of ethics in dealing with other people. For example, with graphics packages students can easily design beautiful graphs and charts to illustrate a point. However, instruction must teach them the ethical implications of depicting information graphically. In addition, students must discuss the subtle meanings of words. What does it mean when someone says that the board was elected by an *overwhelming* majority, that the product only costs X amount of $$? Ethical writing is not just clear and factually correct, it is also appropriate for the particular audience and situation (Selzer, 1983a). Good business communication goes beyond mechanical correctness and helps students "expand their stylistic repertoires" (Selzer, 1983a, p. 15).

In order to communicate effectively in the future, the educated person must understand the role of technology in the communication process. Business communication is not so much interested in technology for its own sake but in how technology can help students understand and improve the act of communicating. The goal is to combine the world of science and technology with the humanistic goals of rhetoric (Halpern, 1985). As researchers are examining the impact of technology on the writing process, they are gaining new insights into how people approach writing. The mastery of technology in business communication prepares students to be functional in the information age, thereby meeting the challenge of general education to be able to function well in society.

At the same time, however, the integration raises new concerns about the ethical and legal implications of modern technology. For example, when is a letter truly personalized? When does it pretend to be personalized but is simply word processed and programmed? Are E-mail messages open to the

perusal of management? Is anything written on an employee's computer to be considered private? Technology has also affected the choice of channels, the speed of communication, and the volume of information that is being processed. (See Suggestions for Assignments at the end of this article.)

Communicating in an Increasingly Diverse and Global Environment

Current buzz words in business, government, and academia are *diversity* and *multiculturalism*. This article does not claim business communication can solve all the problems related to diversity, but business communication can contribute to openness and understanding. Business communication instructors have long preached the principles underlying diversity by teaching audience adaptation and reader oriented writing. Audience analysis requires an understanding of the audience and empathy for the audience, both of which are also necessary in dealing with people from different backgrounds.

In business communication, students learn to communicate in context. They realize that it is not enough to know formulas, theories, and models. They must be able to communicate their knowledge, their concerns, and their recommendations to a specific audience. They begin to see that information is relative and that knowledge is power only if it can be used and communicated effectively.

Modern business communication's focus on audience comes from several directions. Kinneavy's communication triangle, drawing on concepts of classical rhetoric, consists of encoder, decoder, and reality (1971). Flower (1985) argues that it is essential to transform *writer-based writing* to *reader-based writing*, putting oneself into the place of the reader. Much research has been conducted on audience analysis, including how to handle multiple audiences (see Berkenkotter, 1981; Keene and Barnes-Ostrander, 1985; Knoblauch, 1980;

Mathes and Stevenson, 1991). This emphasis on research into the role of the audience has reconfirmed the connection between theoretical understanding and practical pursuits of business communication. The better students understand the role of the audience in the communication process and the better they can adapt to their audiences, the more effectively they can communicate.

With a solid background in business communication, students will have an easier time understanding the issues involved in adapting to diverse audiences and respecting cultural differences. Jacobi (1990), for example, maintains that audience analysis in business communication can engender respect for others and avoid manipulation.

Students of business communication learn to look at a situation/problem from the reader's point of view. They think of both the reader's and the writer's interests. When examining the goals, the viewpoints, and concerns of the audience, they reexamine their own beliefs and become cognizant of the differences. Business communication gives them some of the basic tools of communicating and working with people from other backgrounds who hold different views of reality. (See Suggestions for Assignments at the end of this article.)

Conclusion

In its best form, business communication provides a forum for discussion of ideas and principles in the pursuit of becoming a responsible and effective person in one's professional and private life. When it does that, it contributes to the general education of the students.

Suggestions for Assignments

What can instructors do to develop these skills? Following are some suggestions for assignments that can be used both at the high school and college level.

Problem-Solving

1. The student has just completed a job interview. It went well, and the student hopes to get the job. Just before leaving, the interviewer says: "The job will require quite a bit of writing, and you need to be able to make some decisions. I really would like to have a sample of your writing and problem solving skills. Why don't you write me a letter identifying a problem in an organization you have worked for or are a member of."

   Teaching note: This assignment requires students to identify a problem clearly and precisely. In the beginning, many will have a vague idea of a problem, but they may have a hard time separating symptoms from the underlying problem. The instructor can design several assignments based on this problem. The first assignment can require students to identify the problem. In a second assignment, the student can be asked to examine suggestions for solving the problems and making recommendations.

   The assignment also teaches reader adaptation. If thestudent writes to a recruiter, he/she will have to give a description of the organization because the recruiter is not familiar with it. On the other hand, if the student were to write to someone in the organization, the detail of the necessary information may change. In both cases students must watch for tone. They need to focus on the problem, on issues, on solution, not on people and their faults.

The assignment also teaches appropriate format: letters for external communication, memos for internal communication.

2. The student is asked to write four letters about a problem with a recent purchase--CD, video game, software, etc. The series includes the following readers:
   a. the store where he/she purchased the item
   b. the manufacturer of the product
   c. the teacher of the class, explaining the situation
   d. his/her best friend

   Teaching note: This exercise emphasizes audience adaptation, tone, and detailed description of the problem. The style of writing will depend on the intended reader. This exercise would also work well as oral presentations.

3. Students choose a problem relating to school, for example, clubs, classrooms, scheduling. They identify the causes of the problem, the effects of the problem, and possible solutions. They make their presentation for a variety of audiences: teachers, principals, PTA, school board, student government.

   Teaching note: This assignment lends itself to both written and oral presentation. It also encourages the use of graphs, charts, and other visuals.

Ethical Use of Information

1. Students can study graphs and charts in papers and magazines to see how data is presented. Their analysis first requires them to discuss the rules and guidelines for preparing charts and graphs and then to determine whether the examples they choose follow them. If they violate the rules, the students can discuss how the

violations distort the facts and how they may influence the reader's perception.

2. Students can research legal issues related to the use of e-mail, voice mail, software. They will find that laws in those areas are still underdeveloped and lag behind the technical developments in business.

3. Annual reports are good sources for the study of ethical presentation of information. They can examine how the letter to stockholders in the annual report presents information if a company lost money, had a good year, or had an average performance.

   Teaching note: For assignments in this area, the class should identify the problem and discuss the results of the distortions or unethical presentations. The students could suggest how to solve the ethical dilemma.

Diversity

1. Some students are living in a diverse environment; others have not had exposure to diversity. Students can research the ethnic, religious, and racial diversity of their school and/or community. They can present their information both orally and in writing.

2. As a separate assignment or in combination with the first assignment, students can interview people from different backgrounds on a specific issue.

3. Students can collect advertisements in papers and magazines to determine whether the advertisements reflect the diversity in the country. This examination can include presentation, stereotypes, and responses to the ads.

4. The class can discuss the changing of the workforce. The report, "Workforce 2000," is an excellent source.

5. The video, "Going International," illustrates different cultural approaches to doing business. This video can be particularly helpful for students who have not experienced diversity.

References

Berkenkotter, C. (1981). Understanding a writer's awareness of audience. College Composition and Communication, 33, 388-399.

Bowman, J., & Branchaw, B. (1988). Business report writing (2nd. ed.). Hinsdale, IL.: The Dryden Press.

Driskill, L. (1992). Business and managerial communication. Hinsdale, IL.: The Dryden Press.

Flower, L. (1985). Transform writer-based prose into reader-based prose. In K. Harty (Ed.), Strategies for business and technical writing (pp. 43-64). Chicago: Harcourt Brace Jovanovich.

Garver, E. (1985). Teaching writing and teaching virtue. The Journal of Business Communication, 22(1), 51-73.

Hairston, M. (1982). The winds of change: Thomas Kuhn and the revolution in the teaching of writing. College Composition and Communication, 33, 76-88.

Halpern, J. (1985). How do the new technologies affect composing on the job? In L. Odell & D. Goswanii (Eds.), Writing in nonacademic settings (pp. 158-189), New York: The Guilford Press.

Jacobi, M.J. (1990). Using the enthyneme to emphasize ethics in professional writing courses. The Journal of Business Communication, 27(3), 273-292.

Keene, M., & Barnes-Ostrander, M. (1985). Audience analysis and adaptation. In M. Moran & D. Journet (Eds.), Research in technical communication: A bibliographic sourcebook, (163-191). Westport, CT: Greenwood Press.

Kinneavy, J. (1971). A theory of discourse. New York: Norton.

Knoblauch, C. (1980). Intentionality in the writing process: A case study. College Composition and Communication, 3, 153-159.

Locker, K. (1991). Business and administrative communication (2nd. ed.). Homewood, IL: Richard D. Irwin, Inc.

Lunsford, A., & Ede, L. (1984). On distinctions between classical and modern rhetoric. In R. Connors, A. Lunsford, L. Ede (Eds.), Essays on classical rhetoric and modern discourse (pp. 37-49). Carbondale, IL: Southern Illinois University Press.

Mathes, J. C. & Stevenson, D. (1991). Designing technical reports (2nd ed.). New York: Macmillan Publishing Company.

Selzer, J. (1983a). Composing processes of an engineer. College Composition and Communication, 34(2), 178-187.

Selzer, J. (1983b). Emphasizing rhetorical principles in business writing. In J. Halpern (Ed.), Teaching business writing (pp. 3-20). Lafayette, IN: Copymat Services.

Varner, I. (1991). Contemporary business report writing (2nd ed.). Chicago: The Dryden Press.

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PERCEIVED IMPORTANCE OF HIGH SCHOOL BUSINESS CLASSES AS PREPARATION FOR COLLEGE

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Simin Cwick

Abstract

The purpose of this study was to determine influences on choice of a college major and perceptions of college students about the importance of high school business courses as preparation for college. Respondents rank the desire to earn a good living as having the greatest influence on their choice of a college major, and they perceive business education courses as valuable preparation for majoring in business in college. Findings indicate that high school business education classes should be included as part of the college prep curriculum for those students who plan to major in business.

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A volatile mix of demographic, economic, and technical forces has left business educators in a dilemma. The back-to-the-basics movement, an increase in high school graduation requirements, more stringent college admissions standards, and an overall decrease in the number of secondary students have culminated in a consequent decrease in high school business education enrollments.

Providing students with a general education and preparing them for careers in business have long been primary goals of business educators. Many schools, however, consider business education courses as strictly vocational preparation. In 1990, 50.8 percent of all high school sophomores were enrolled in general education programs; 41.3 percent were in college preparatory programs; and 7.9 percent were in vocational programs (National Center, 1993). Fifty percent of high school graduates do not attend college and of those who do attend, 75 percent do not complete a college degree (Yopp, 1994). Yet, secondary schools and counseling efforts seem to be focused primarily on encouraging youths to continue their education in college (Glover and Marshall, 1993).

Need for the Study

This study focuses on the need for business educators to expand the goals of business education and focus on business education as preparation for college. The largest number of bachelor's degrees conferred in 1991 was in the field of business (National Center, 1993). Therefore, business classes, in some cases, should be viewed as preparation for college, especially for those students who plan to major in business in college.

Purpose of the Study

The study was undertaken to examine the perceptions of college students concerning factors that influence their choice of a college major and the value of business education classes as preparation for college. Findings of this study can be used to assist secondary teachers in promoting the need for students who are going to college to take business education courses in high school.

Objectives of the Study

The overall objective of the study was to determine how students perceive high school business courses as preparation for college. Specific objectives were to find answers to the following questions:

1. What do students perceive to be the greatest influence on their choice of a college major?

2. At what time in their educational programs do students decide on their college major?

3. What high school business courses do college students feel benefitted them most in their college programs?

4. What high school business courses do college students feel would have been beneficial in their college program?

Review of the Literature

While research relating directly to the problem of this study is limited, several studies have focused on the effects of specific high school courses on students' performance in college. A brief summary of accounting, economics,

introduction to business, and keyboarding studies provide a broad perspective to the problem of this study.

In a study to determine factors to predict success in accounting principles courses, Bouillon, Doran, and Smith (1990) found ACT score, cumulative GPA, high school accounting, and selecting an accounting major were significantly and positively related to success. Hellmuth (1990) concluded that students with first-year high school accounting do perform significantly better on some concepts as compared to students with no prior accounting.

Clark and Davis (1992) conclude that economic education in high school classes does seem to make a difference in student success in economics in college. Exposure to high school economics is positively and significantly related to students' grades in college principles courses according to Myatt and Waddell (1990). Brasfield, Harrison, and McCoy (1993) determined that having had high school economics was positively and significantly related to students' grades in introductory economics classes in college.

Lewis, Hearn, and Zilbert (1991) found that having had keyboarding in high school contributed in a significant way to persistence in post-secondary education. "Over 5 percent of the time spent in post-secondary education appears to be directly attributable to the skills of keyboarding ..." (p. 340).

Students enrolling in a high school introductory business course tend to develop a much more positive attitude toward a business career than those who do not take the course (Alsop, (1978).

Methodology

A survey instrument was used to collect data about the value of high school business classes as preparation for college. The instrument was developed by a high school business

teacher and two university faculty members. One class taught by one of the researchers was used to test the research instrument. Twenty-two students completed the instrument and made suggestions for improvement. These suggestions were included on the revised instrument.

The accessible population was identified as all students currently enrolled in College of Business classes during the spring semester at a small Midwestern university. The researchers administered the survey instrument to eight randomly selected business classes, collecting 205 useable questionnaires.

Part I of the questionnaire collected demographic information about respondents, Part II asked respondents about their decision on a college major, Part III inquired about courses respondents had taken in high school, and Part IV asked about courses respondents felt helped them in their college classes. Responses were tabulated, frequencies and percentages calculated, and answers to open-ended questions were categorized.

Findings

Respondents included 64 males and 141 females. Distribution of respondents according to year in school is shown in Table 1.

Table 2 summarizes the distribution of respondents by major. As shown, the largest number of respondents (27.3%) listed some area of administrative support as their major; accounting/finance was the second most frequently listed major (19.5%).

Table 1

Distribution of Respondents by Year in School

N = 205

Year in School	Frequency	Percent
Freshman	47	22.9
Sophomore	59	28.8
Junior	43	21.0
Senior	50	24.4
Not responding	6	2.9
Total	205	100.0

To determine factors perceived to be the greatest influence on their choice of a college major, respondents were asked to rank five factors they felt had been the greatest influence on their choosing a college major. As shown in Table 3, 126 respondents (61.5%) ranked the desire to earn a good living as having the greatest influence on their choice of a college major. One-hundred seventeen respondents (57%) ranked courses they have taken as having the greatest influence. Instructors and family are ranked as having the least influence on respondents' choice of a college major. Some respondents provided multiple responses.

Table 2

Distribution of Respondents by Major

N = 205

Course	Frequency	Percent
Accounting/Finance	40	19.5
Administrative Support	56	27.3
Business Teacher Education	20	9.8
Management	15	7.3
Marketing	15	7.3
Other areas of business	29	14.1
Majors other than business	21	10.2
Undecided	9	4.4
Total	205	99.9

Table 4 summarizes responses concerning the time in their educational careers respondents decided on a college major. The largest number of respondents (57) indicated they had decided on a major during their sophomore year in college. As shown in Table 4, there is no significant difference in the number of respondents who decided on a major during their sophomore year in college, freshman year in college, and during high school.

Table 3

Influences on Choice of College Major

N = 205

	Level of Importance		
	1	3	5
Instructors	36 (17.6%)	47 (22.9%)	94 (45.9%)
Courses I have taken	117 (20.5%)	42 (9.3%)	19 (57.1%)
My family	49 (23.9%)	36 (17.6%)	90 (43.9%)
My desire to earn a good living	126 (61.5%)	28 (13.7%)	31 (15.1%)
Other	42 (20.5%)	15 (7.3%)	66 (32.2%)

1 = most important, 3 = average importance,
5 = least important

Table 4

Time of Decision for College Major

N = 205

Time	Frequency	Percent
During high school	53	25.8
During freshman year in college	55	26.8
During sophomore year in college	57	27.8
During junior year in college	19	9.2
During senior year in college	2	1.0
Not yet decided	12	5.9
Not responding	7	3.4

Table 5 summarzies responses concerning business courses respondents had taken in high school. As shown, keyboarding was taken by more respondents than any other business course with accounting being taken by the second largest number of respondents.

Table 6 summarizes responses concerning high school business courses that have been beneficial in college. Accounting I was listed more frequently than any other business course as having been the most beneficial in college with typing/keyboarding ranked as the second most beneficial high school business course.

Table 5

High School Courses Taken by Respondents

N = 205

Course	Frequency	Percent
Keyboarding	145	70.7
Accounting	139	67.8
Microcomputer Applications	88	42.9
Shorthand/speedwriting	55	26.8
Office Procedures (vocational)	47	22.9
General Business	43	20.9
Recordkeeping	39	19.0
Business Math	39	19.0
Accounting II	35	17.1
Business Communications	31	15.1
Business Law	27	13.2

One questionnaire item asked respondents to indicate their reasons for taking business courses in high school. While a majority (62.4%) indicated that taking business courses in high school better prepared them for college, respondents supplied an exhaustive list of reasons for their responses. These responses were classified into five general categories for ease of presentation. As shown in Table 7, the most often mentioned reason was the business foundation needed for all business courses in college. A common theme was that students who had taken business courses in high school felt better prepared in classes when compared with students who had not taken business courses in high school.

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Table 6

High School Courses Identified by Respondents as Most Beneficial in College

N = 205

	Frequency	Percent
Accounting I	83	40.5
Typing/Keyboarding	70	34.1
Microcomputer Applications	69	33.7
Shorthand/Speedwriting	31	15.1
Office Procedures (Vocational)	29	14.1
General Business	23	11.2
Business Communication	13	6.3
Recordkeeping	6	2.9

Respondents who had taken computer courses in high school felt they could prepare assignments for all classes better than students who had not taken computer classes in high school. Ten students indicated that taking a business communication course in high school better prepared them for writing assignments in college.

Although several specific courses were listed as ones respondents wished they had taken, accounting was the most frequently mentioned subject. A majority (78%) of respondents who had not taken accounting in high school stated they felt high school accounting could have better prepared them for college accounting. A number of respondents indicated they had problems with college accounting and felt this was because they had not taken a high school accounting class.

The second most frequently mentioned course respondents felt would have prepared them for college was microcomputer applications. One respondent stated that he had taken few business classes in high school and because of this, he had not had an opportunity to become interested in business until he started college.

Table 7

Reasons for Taking Business Courses in High School

N = 205

Reason	Fequency	Percent
Good business foundation needed for all courses	52	25.4
Computer skills needed to prepare business assignments	19	9.3
Accounting in high school to prepare for accounting in college	12	5.9
Business knowledge needed for general purposes	12	5.9
Business communication needed for preparation of written assignments	10	4.9

Conclusions

The following conclusions have been made concerning the perceived importance of high school business classes as preparation for college and the factors that influence students in their choice of a college major.

1. Business students rank the desire to earn a good living as having the greatest influence on their choice of a college major. The second greatest influence on their choice of a college major is courses they have taken in school.

2. There is no significant difference in the number of students who decide on their major in high school, during their freshman year in college, and during their sophomore year in college.

3. Keyboarding is the high school course most often taken by business students; accounting is the second most frequently listed high school course taken by business students. Accounting is identified as the course students perceive to be the most beneficial as preparation for college; keyboarding is identified as the second most beneficial course in preparation for college.

4. A majority of business students indicate that taking business courses in high school better prepared them for college. The reason most often given for taking business courses in high school is that high school business courses provide a good business foundation for all courses. A majority of respondents who had not taken accounting in high school listed accounting as the course they most often wished they had taken.

Implications for Business Education

The findings of this study suggest that business education classes do play a role in preparing students for college, especially those students who major in some area of business. Business teachers should share this information with high school students, administrators, and counselors. Not only do high school business classes provide the foundation needed for all business courses in college, high school business courses often influence students in their choice of a major in college.

Recommendations

This study needs to be replicated on a much wider scale with a national sample. Results can be used to promote the value of some business education courses as preparation for college. Responses from students about the value of business education courses can provide a very valuable message to high school students. Business teachers can use findings from such studies to assist counselors and administrators in gaining a better understanding of the role of business education for the college-bound students, especially those who will major in business.

Business teachers should use the findings of this and similar studies to inform students, counselors, administrators, and parents about the value of business classes. Business educators need to use data from this and similar studies to provide direction for shaping the future of business education.

References

Alsop, R. (May 10, 1978). Programs to teach free enterprise sprout on college campuses. Wall Street Journal, 1.

Brasfield, D. W., Harrison, D. E., & McCoy, J. P. (Spring, 1993). The impact of high school economics on the college

principles of economics course. Journal of Economic Education, 99-111.

Bouillon, M. L. Doran, M. D., & Smith, C. G. (September-October, 1990). Factors that predict success in principles of accounting classes. Journal of Education for Business, 23-26.

Clark, J. R., & Davis, W. L. (1992). Does high school economics turn off too many students? Journal of Education for Business, 152-155.

Glover, R. W., & Marshall, R. (Spring, 1993). Improving the school-to-work transition of American adolescents. Teacher College Record, 94(3), 588-606.

Hellmuth, S. (Summer, 1990). A comparison of the effects of first-year high school accounting on student performance on selected concepts taught in first-semester college accounting. The Delta Pi Epsilon Journal, 32(3), 97-107.

Lewis, D. R., Hearn, J. C., & Zilbert, E. E. (1991). Keyboarding as general education: Post-school employment and earnings effects. Economics of Education Review, 10(4), 333-342.

Myatt A. ,& Waddell, C. (1990). An approach to testing the effectiveness of teaching and learning of economics at high school. Journal of Economic Education, 21(3), 355-363.

National Center for Educational Statistics. (1993). Digest of education statistics. U.S. Department of Education, Office of Educational Research and Improvement. Washington, DC: U.S. Government Printing Office.

Yopp, M. C. (February, 1994). On secondary business education. Business Education Forum, 47(3), 15-19.

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CREATING COMPUTER-BASED PRESENTATIONS: A SKILL FOR TODAY'S WORKPLACE

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Abstract

Presentation software packages allow users to enhance traditional presentations and to create computer-based presentations. Presentation software is used for internal and external communications within business and industry. Incorporating presentation software packages into the curriculum, therefore, will provide students both the opportunity to strengthen their communication skills and to use technology available in the workplace.

A presentation software package provides students with a wide range of options for enhancing their presentations. Those options include sound, graphics, animation, and video. The instruction will include teaching students to plan a message, to create a presentation using available options, and to evaluate the message and presentation style.

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Using technological tools is one of the competencies listed as crucial for all workers by the Secretary's Commission on Achieving Necessary Skills (SCANS). Additionally, the SCANS report stresses the importance of communication skills, team work, and decision making. One means of providing students with the opportunity to improve their communication skills, to work in teams, to make decisions, and to be creative is to incorporate presentation software into the curriculum. As the students strengthen their communication and team work skills, they also gain experience using tools available in the workplace. Educators wishing to provide students with opportunities to work with computer-based presentations will need to make investments in both software and hardware.

Using Computer-based Presentation Software

Presentation software packages are widely accepted in the workplace. Not only are the packages relatively inexpensive, they are easy to learn. Michael French, an analyst at Inteco Corp., a market-research firm, sees an expanding use of multimedia-type applications at the desktop level (Fisher, 1991). Workers use presentation software to enhance their internal presentations and as a way to provide information to customers. Jerram (1994) reports that a survey conducted in 1994 by Software Publishing Corp. found the use of electronic presentations had doubled over the previous two years. One important reason for the growth is the ease of use. Users create their own presentations without the help of specialists and without extensive training.

Defining Computer-based Presentations

A computer-based presentation is defined as a series of slides. A slide can be compared to an overhead transparency. In a traditional presentation, the speaker places a transparency on an overhead projector to help the audience understand key concepts. Presentation software packages provide multiple

options allowing the user more choices regarding how material is displayed. Not only can the user select multiple colors and fonts, the user can incorporate sound, images, text, graphics, and possibly animation into the individual slides.

The computer-based presentation can be printed screen by screen and traditional transparencies made from the printout. The use of transparencies, however, defeats the purpose of using multiple presentation options. Sound and animation are not possible with traditional transparencies. To get the full impact of the computer-based presentation, audiences should view (and listen to) the presentation complete with fade-ins, on-screen drawings, color, and drum rolls via a computer monitor or on a large screen with the help of a computer projection device.

Producing and Viewing the Presentation

To produce or to view a computer-based presentation, the minimum suggested configuration is a 486 computer. A mouse and VGA monitor are needed. Graves (1995) reports that a windows-based presentation software product requires "4 megabytes RAM space and 15+ megabytes for hard disk installation" (50). Other add-on equipment is discussed later in this article.

Selecting Software

Presentation software is available for under $200. The old adage "you get what you pay for" is worth remembering as you shop for software. The low-end products' limitations will soon frustrate even the novice user. In the classroom, the sophistication of the students and the available teaching time are important considerations when selecting software. Students with considerable computer exposure, and especially those with desktop publishing skills, will more quickly master the software than will novice computer users. Some packages

have excellent tutorials and help screens. If students have limited computer experience, a package with quality help screens, easy-to-use manuals, and a tutorial will help reduce student frustration.

Several presentation software packages are receiving excellent reviews. A sampling of products appropriate for the classroom are listed in Figure 1. Software reviews, found in computer-related periodicals such as Windows Magazine, PC World, PC Magazine, MacUser, Electronic Learning, NewMedia, Computer Monthly, and Multimedia Review, will provide an overview of the packages' capabilities, limitations, prices, and hardware requirements.

Figure 1

Sampling of Presentation Software Packages

Lotus Freelance Graphics	Has an in-depth tutorial and easy-to-use features such as templates and transition effects. Costs around $400.
WordPerfect Presentation	Easy to manipulate graphics and excellent sound effects. Costs around $400.
Harvard	Contains online help, basic design advice, Graphics and strong charting features. Costs around $300.
Macromedia Action	Has built-in animation tools and high-quality CD-ROM clip art and multimedia files. More options than Freelance, Presentation, or Harvard Graphics. Costs around $250.

An important consideration when selecting a software package is the amount of exposure students will receive to computer-based presentations. If students' exposure will be limited to preparing visuals with text and graphics, a less sophisticated package will be adequate. If students will be incorporating sound and importing visuals, not only is a more powerful software package needed, but additional hardware also is required.

Adding Sound

Adding sound is a basic and often used feature in computer-based presentations. To add sound, an audio card, a microphone, and speakers are needed, and a CD-ROM drive is desirable. The price of the add-on sound accessories relates directly to the desired quality and the number of sounds to be played simultaneously.

The number of sounds that can be played simultaneously is referred to as multitimbrality. Boards generally offer 8-, 10-, and 16-channel multitimbrality. The number of available channels influences the price. The quality of the produced sound also is a consideration. The less expensive accessories typically provide the desired sound but it is "grainier" than more expensive cards and speakers. For classroom purposes, the less expensive products should not be a problem.

A microphone is an inexpensive add-on, and it allows students to insert narratives and sound effects. Although a microphone can be used to capture music, purchasing digital audio sequences on CD-ROM is a better policy. The purchase price includes a license to use the music for non-broadcast projects. This prevents the ethical and possibly legal consequences of using music clips without permission.

Students will need instruction on using sound to help an audience understand or appreciate a message. Poor quality sound or an overly long passage detracts from a message. For example, a selected sound is often used to alert the audience that a change is coming. Playing the same sound, such as chimes, is more effective than using multiple sounds. Students will benefit from exposure to presentations using a variety of sound effects. They will soon learn to distinguish between a sound that enhances a message and one that distracts from the message.

Students may find that when they mix elements such as animation and sound clips, the computer system cannot mesh the elements into a smooth presentation. Depending on the computer system being used, sound passages can throw off the synchronization of the presentation elements because of the amount of processor time required by the audio card. This problem is especially acute if audio files are stored on the hard drive for playback. In such cases, the students will need to make decisions on whether to use only sound, only animation, or to change the sequencing to compensate for the lack of synchronization. Such exercises allow students to make decisions. If students are working in teams, they will need to make many compromises and judgments on the joint project.

Adding Visuals

Adding visuals is probably the most exciting feature of presentation software. The types of visuals to be added to the presentation depend on the equipment available. A video card is required to import visuals. To bring a still picture into a presentation, either a scanner or a video camera can be used. Video cameras provide more versatility and higher resolution. Video cameras include digital and analog cameras. A digital camera captures only black and white images; analog cameras capture color images and are capable of reproducing images with higher resolution than a digital camera.

If full-motion video is desired, a camcorder and VCR can be used. Students can film their own material, or they can use existing videos. A videocassette recorder (VCR) is an excellent option because the equipment is already available in most schools.

Another popular option is a CD-ROM drive. CD-ROM disks are available with video "clip art." Students can simply select a video from the clip art library and import it into their presentations. A third option, and one that is very versatile, is a videodisc player. Videodisc players support sound, still pictures, and full motion video. An advantage of videodisc technology is the fast access of data.

Although available finances influence the accessories purchased, the main criteria should be the intended usage. A videodisc player is not necessary if the purpose is simply to introduce students to the technology. In that case, a flatbed scanner will be adequate. If the goal is to produce high-quality, professional presentations, however, a scanner alone will not suffice.

Figure 2 includes a listing of common add-on equipment to facilitate adding sound and visuals.

Introducing Presentation Software to Students

Most presentation software packages have a tutorial. Students who are familiar with the computer and with using a mouse should have little difficulty completing the tutorial on their own. A series of teacher-directed, mini-assignments can lead students through the basic applications. Students will enjoy experimenting with the options, and the instruction time should allow for that experimentation. The number of assignments will depend on the degree of complexity the students are expected to incorporate into their presentations.

Figure 2

Multimedia Add-on Equipment

Audio Card	Transfers sounds to computer form. Works with speakers and microphone.
Speakers/Headphones	Allows user to hear sounds imbedded in presentation.
Microphone	Captures the sounds for input to computer.
CD-ROM Drive	Source of audio sequences and clip art and stores presentations.
Video Card	Transfers non-computer images to computer form. Works with scanner or video camera.
Scanner	Captures photographs or illustrations for input to computer.
Video Camera	Captures still and moving images for input to the computer.
Videodisc	Provides input to computer, stores presentations, and supports interactive presentation.

As with most instruction, it is a good policy to start simple. Several small practice exercises experimenting with sound and graphic placement will allow students to gain confidence using the software. A four- to five-slide presentation with one sound

clip and at least two visuals would be appropriate for a first assignment. Students should be expected only to use the sound clips and visuals available with the software package for their initial presentations. Later assignments can incorporate using a microphone, scanner, CD-ROM, or VCR for capturing sound and visuals.

Planning the Presentation

The key to a good presentation is research, audience analysis, and organization. Good planning greatly reduces the lab time required to produce the presentation. The bulk of the time involved in producing the presentation is not in the use of the software, but in the design of the message.

It is important to stress that using the software to prepare the presentation is the last step, not the first step, in creating a presentation. After the students have learned to manipulate the software and accompanying hardware, they are ready to design a presentation requiring research.

The first step is to have the students state the goal of the message (ie., inform, sell, train) and the target audience. After the students and instructor agree on the message's goal and audience, students can begin to collect information, plan visuals, and select sound and graphics. To help students stay focused on their message and intended audience, have them stop periodically to determine if they are "on track." With all the special effects available to them, it is easy for students to lose sight of the message's purpose.

Designing Hints

A storyboard can be used to help students design their message. In its simplest form, a storyboard is a single sheet of paper with three columns. Column one lists any text to be shown on the screen, column two contains the accompanying

sound effects, and column three has a sketch or description of any graphics to be included on the slide. The slides are listed in sequential order on the storyboard.

Another procedure allowing easier editing is the use of colored index cards. The cards are used in place of the three-column storyboard. A different color is used for each option. For example, a blue card may represent text, a green card represents sound, and a yellow card represents graphics. Students outline the text, sound, and graphics of the presentation by laying out the cards. If both text and sound will occur at the same time, a blue and a green card are placed side by side. Whatever text will be visible on the screen is printed on the blue (screen) card and a description of the accompanying sound is printed on the green (sound) card.

The purpose of this preliminary exercise is to have students and teacher agree on the message's purpose and presentation style. At a glance, the cards show the progression of the presentation and the variety in media choice. In addition, the cards allow for easy revision as students edit the presentation. Students proceed to the production process when the presentation design is approved. The approval is based on the appropriateness of the planned presentation in relation to the goal, audience, and purpose of the message.

Creating Slides

Production is the creation of the message content. Students key in the text, select and place graphics, and input sound. For beginning students, it is recommended that the presentation options (sound and visuals) be limited to those available within the presentation software package. As students gain confidence, they can begin to use add-on equipment (such as scanners and VCRs) to incorporate special effects.

The easiest approach to producing a slide show is to complete one segment at a time. A segment of a computer-based presentation is similar to a chapter in a written report. For early assignments, there should only be one segment. Students will follow the plan they outlined on the storyboard or with index cards. Some revision is expected, but if the planning was thorough, the production will closely match the design layout.

For presentations with multiple segments, students will complete one segment at a time and then combine the segments into a whole presentation. Students need to be alert to transition problems. For example, is segment three ending with a video and segment four beginning with another video? The viewer will have difficultly switching from one video to another without a break. A text screen should be inserted between the two videos to aid in the transition from segment to segment. Students can help each other by viewing one another's work and providing production suggestions.

Evaluating Presentations

The final step is to evaluate the presentations. An evaluation checklist is useful and contains criteria on the use of the technology as well as criteria on message content. Students should evaluate their own and others' presentations. A sampling of evaluation checklist items is shown in Figure 3.

Providing students with opportunities to examine other presentations and to provide suggestions and constructive criticism to other students will strengthen their analytical and communication skills. Instructors may want to allow students an opportunity to incorporate the suggestions from classmates before any grading is conducted.

Figure 3

Sample Checklist Items for Presentation*

5 4 3 2 1 0	Content appropriate for intended audience
5 4 3 2 1 0	Subject matter accurate
5 4 3 2 1 0	Message's objectives (inform, sell) met
5 4 3 2 1 0	Message well organized and flows smoothly
5 4 3 2 1 0	Presentation captures user's attention
5 4 3 2 1 0	Visuals appropriate for each segment
5 4 3 2 1 0	Selected sound clips enhance presentation
5 4 3 2 1 0	Sound is crisp and clear
5 4 3 2 1 0	Typefaces for text and titles are consistent
5 4 3 2 1 0	Screens are in balance (text and visuals)
5 4 3 2 1 0	Color focuses attention on important points
5 4 3 2 1 0	Timing of show appropriate for audience
5 4 3 2 1 0	Smooth transition between segments

Key: 5 = Excellent
4 = Very good
3 = Good
2 = Needs some work
1 = No
0 = Not applicable

*Select items appropriate for specific assignment.

Conclusion

Today is the perfect time for getting involved with computer-based presentations. According to D'Ignazio (1992), multimedia and presentation skills will soon "be necessary for the minimum level of business and professional communication" (p. 28). Presentation software allows students to use the technology they can expect to find in the workplace as they improve their communication, decision making, and team work skills.

The steps in producing a computer-based presentation are design, production, and evaluation. During the design step students break the presentation into small segments and determine the content of the presentation slide by slide. Students write the text and insert the graphics and audio sections during the production stage. Finally, evaluation is a critical look at the entire message to determine if the message's goals are achieved and if the presentation style is professional.

References

Bergman, R., & Moore, T. (1990). Managing interactive video/multimedia projects. Englewood Cliffs, NJ: Educational Technology Publications.

D'Ignazio, F. (1992, November/December). Getting a jump on the future. Electronic Learning, 28, 30.

Fisher, S. (1991, January 21). Multimedia strives for corporate foothold. PC Week, 140.

Graves, P. (1995). Desktop presentation software--What is it and how can it be used? In N. Groneman (Ed.), Technology in the classroom (pp. 50-61). Reston, VA: National Business Education Association.

Jerram, P. (1994, October). Who's using multimedia. New Media, 48-58.

Lindstrom, R. (1995, August). Multimedia is the message. PC World, 143-157.

Safi, Q. (1992, January 20). Madison Ave. puts spark in business presentations. PC Week, 29, 32.

U.S. Department of Labor, (1991). What work requires of schools: A SCANS report for America 2000. Washington, DC: U.S. Government Printing Office.

Yavelow, C. (1993). Audio digitizers. New Media (1993 Multimedia Tool Guide Special Issue), 5.

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THE SPACING EFFECT: WHAT IS IT? AND HOW CAN IT IMPACT ON YOUR BUSINESS CURRICULUM?

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Abstract

Despite the diverse business teacher education programs and the busy schedules of employed business teachers, one can learn effective teaching techniques. One technique that has been proven through research for over a century is the spacing effect, a technique that applies spaced instruction over several days rather than massing instruction in one day. It is robust and dates back to 1885. This article provides useful discoveries from five early studies. The information about each study will be presented with an explanation and a concise research conclusion. Business teaching recommendations follow. As a result of reading about spacing effect research, business teachers will be able to skillfully and carefully apply this knowledge to enhance their students' retention abilities.

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There is no one correct method to effectively manage instructional time, nor is there one correct method to teach all subjects. But as professionals, business teachers must be prepared with a repertoire of skills, tools, and techniques that can be adapted to most situations that best promote student learning. Among these skills should be knowledge about the spacing effect, an instructional time management tool which piques students and promotes learning.

This article introduces the spacing effect as an instructional tool for business educators. It has been studied for a long time; studies go back to 1885. Many times it was intuitively understood by educators over the years, although it usually was not promoted in preservice or in-service teacher education programs, and generally teachers did not know about research that supported it.

This article offers information about the spacing effect and lists five studies as evidence that spaced learning is a useful teaching technique. The selected studies presented here are listed with a brief explanation and a concise research conclusion. General teaching recommendations follow.

So much is changing the way and what we teach in business education. Technology, globalization, telecommunications, multi-media, computer applications, and the Internet are a part of the business curriculum as well as basic business concepts. What is more, preservice business teacher education programs are often overloaded with requirements and courses. Often, there is little time to explore new techniques or learning theories. Once teachers are employed, their time is precious. Few opportunities are available for employed business teachers today to learn about all the new technological changes, let alone any learning theories--like the spacing effect.

What is the Spacing Effect?

Sometimes business educators at all levels fail to observe psychological research findings even though results are significant and applicable to the business education curriculum. The spacing effect is an example. The history of this phenomena is deeply entrenched in psychological research. What is more, psychologists like Skinner and Piaget are recognized as contributing learning theories, while little credit has been given to researchers or studies about the spacing effect even though it has been studied longer than other theories.

One example of the spacing effect can be demonstrated by teaching a class during three weekly one-hour classes instead of blocking this instructional time. Blocked or massed instruction can be demonstrated when a class is scheduled to meet once a week for three hours or twice a week for 90 minutes. This is a recent scheduling pattern in educational settings.

Evidence from the spacing effect research refutes massed and blocked scheduling style of instruction. Massed instruction, while maintaining the same teacher/pupil contact ratio as spaced instruction, generally weakens quality instruction. Advocates of quality education, who understand the robust phenomena of the spacing effect, can approach their planning and teaching assignments as opportunities to enhance instruction positively.

The validity of past research indicates that the spacing effect yields better retention over massed instruction. Retention of facts and skills are important elements for critical thinking and problem solving. Remembering and retaining information are fundamental tools that enable students to construct complex and sophisticated thought chains which translate into problem solving skills or creative ideas. Teaching

methods that sharpen long-term retention like the spacing effect does, improve one's critical thinking and problem solving skills.

Spacing Effect Research

The spacing effect as a psychological theory began with Ebbinghaus' studies in 1885. A trail of related research can be traced from the early 1900's, through the 1960's, and more recently into the 1990's. On the one hand, this noncontiguous chain of research has been claimed by some as stifling the practical application of the spacing effect. On the other hand, the fragmentation of research interest for over a century has been congruous in reporting fortuitous outcomes. The spacing effect is a remarkably dependable phenomenon, and because it is so replicable, it can be said to be robust.

Dempster (1988) gives an accurate definition of the spacing effect. He stated that the spacing effect "refers to the finding that for a given amount of study time, spaced presentations yield substantially better learning than do massed presentations." The spacing effect refers to the finding that recall is superior when learning sessions are spaced rather than massed. (See LaBonty, 1995; Glover & Corkill, 1987; Melton, 1970; Underwood, 1970; for differing theoretical accounts of the spacing effect.) Rea & Modigliani (1985) reported that "distributed practice typically leads to better retention than massed practice." Previous work has suggested that teaching much material in a massed amount of time is inefficient, possibly because it overtaxes student resources (Smith & Rothkopf, 1984).

Early Studies and Research Conclusions

Here are some examples of early spacing effect studies and concise research conclusions. Recommendations for business educators follow.

Ebbinghaus, 1885

Ebbinghaus reported findings from studies with himself as the subject. He was the first person to document findings from spacing effect research. He found that for a single twelve-syllable recital to be memorized errorlessly, 68 continuous repetitions were required. The same achievement could be accomplished in only 38 distributed repetitions over three days. Spaced learning was decidedly more advantageous than massed learning at a single time.

Research conclusion. As the number of repetitions increase over time, they cut a deeper picture in the mind. The ability of someone to recall what has been etched into the mind through spaced repetitions is improved. Moreover, the efficiency of memorizing is persistent. Memorizing requires less time and repetitions if repeated tasks are planned over several days.

Starch, 1912

Starch observed the spacing repetition findings of Ebbinghaus and others. Starch was intent upon other discoveries. Did distribution or repetition hold true in other fields of learning and did it apply to longer periods than the few minutes that Ebbinghaus' experiments required?

Research conclusion. Starch revealed that optimum work periods were between 10 and 20 minutes. In longer periods, subjects tend to become fatigued and productivity becomes stagnate. It was observed that numerous periods were more economical because a period of rest after newly-formed associations gave these associations a chance to become settled and fixed. An ancillary discovery from Starch's research was the need to "warm-up" to the learning task. Starch does not express an optimum amount of time for

"warm-up," but this observation has important implications for educators.

Pyle, 1913

Pyle found that when subjects learned new characters for the English alphabet that 30-minute practices produced the most efficient results compared to 15, 45, and 60-minute practice periods. It should be noted that Pyle used daily practice sessions.

Research conclusion. Pyle suggested that on the whole, adult habit formation can occur using 30-minute daily practices. However, Pyle exhibited evidence that supports the fact that the 30-minute practice period is the best interval for daily work. The 15-minute period is too short, and the 45- and 60-minute periods are too long to get the best returns.

Perkins, 1914

Perkins discovered that less is recalled when readings are given every day than when a certain interval varying from one to three days is allowed to elapse between readings. She concluded that the most favorable interval seems to be between two and three days for cases in which one or two repetitions are used at a sitting. Perkins reported that the process of "consolidation" continues for at least forty-eight hours and still longer if four or more readings are made on each day.

Conclusion. From Perkins' findings it can be concluded that an interval of one to three days is necessary for consolidation. Consolidation can continue for at least 48 hours and longer. Consolidation is the movement of something into long-term retention.

Lyon, 1914

Lyon set out to discover the optimum distribution of time in an effort to contribute to the more general concern "The Most Economical Method of Learning." His research assessed the "once-per-day" method and the "continuous" method. He reported that material memorized from the "once-per-day" method was retained for much longer periods of time than that memorized by the "continuous" method.

Conclusion. Lyon concluded that when associations have been formed, they should be recalled before an interval of time has elapsed so that the original associations have lost their "color" and can not be recalled in the same shape, time, and order. Candidly, it is most economical to keep material once memorized from disappearing by reviewing the material whenever it starts to fade.

Teaching Recommendations

The spacing effect theory has often been absent from preservice and in-service business teacher education programs. In looking at five selected studies, business teachers today can understand the benefits of this phenomena. Teachers can apply this knowledge to their classrooms. For example, teachers can plan and better schedule their classroom activities to improve student retention when teaching subjects like microcomputer applications, keyboarding, accounting, business communications, and others.

The following teaching recommendations are suggested to help teachers impact their curriculums more positively.

For important concepts to become etched into a student's long-term memory, a teacher should plan teaching methods which repeat and recall desired concepts to be learned by students several times throughout the class period and over

several class meetings. Spaced repetitions of desired concepts to be learned throughout several class meetings will greatly improve students' retention. Students, who have been taught with spaced learning, will be able to recall from long-term memory those concepts or skills to solve problems and think critically.

A microcomputer application class is one example where this technique applies. Students are often expected to use computer commands in the disk operating system (DOS) and Windows©. Ebbinghaus' research suggests that microcomputer commands should be referred to often and reviewed many times in class over several days. This action will form long-term associations that can advance students' computer skills.

Clearly, teaching has varying time constraints such as length of class periods, time of the day, and intervals throughout the week. But no matter what the time constraints, we can learn from Starch's findings--that ten minutes or twenty minutes of instruction are optimum for learning. This suggests that daily lessons should be well-planned to allow for intervals. Keyboarding teachers should plan lessons that are limited to this length.

Concurrently, students need a warm-up time. In business classes, this could be in the form of introducing a current event or review from earlier lessons. These short activities serve not only to introduce or review material, but they prepare students for the instruction ahead.

A keyboarding class is one example where these principles apply. Students need to "warm-up" to the mental as well as physical demands of keyboard practice. Short five-minute drills or exercises at the beginning of class instill a learning atmosphere. These warm-up exercises or keyboarding calisthenics help students mentally and physically focus on keyboarding tasks.

Effective teaching requires among other things efficient use of class time for desired results even when teaching adults. When preparing lessons, it is a good idea to implement Pyle's findings. His research suggested that learning sessions of 45 and 60 minutes do not produce the returns that 30-minute sessions produce. Also, adult learners achieve better results when 30-minute learning activities are organized.

It may be that courses are scheduled for 60-, 90-, or 120-minute blocked classes. In these classes, a business communication lesson,(for example, on the use of library and reference materials), should not exceed 20 minutes. If more than 20 minutes is necessary for a lesson, a pause or divider activity should break up the lesson. A divider activity might be students taking fifteen minutes to examine different journals and articles and report varying ways that references are displayed. This example demonstrates how lessons can be divided into comfortable segments even during 60-, 90-, or 120-minute blocked classes. Also, divider activities and pauses signal to students that the teacher is breaking up instruction and moving on to another concept.

Perkins' research supports the assumption that the learning process needs time for assimilation. Accounting principles that are spaced lessons over two or three days produce the best understanding for students because there is time for assimilation. However, students can not idly sit by for one to three days, as they must review their notes and materials often to strengthen their memory associations. When studying depreciation methods, accounting students should practice methods of depreciation in class for several days and complete worksheets about depreciation outside of class.

Lyon's research provides evidence that all business students can benefit from effective note taking and study techniques. For example, word processing students are advised to review their lecture notes or practice the important

commands shortly after concepts are demonstrated in class; and if possible, to review them again the evening of the same day. Then the lapse of a week or two does not make nearly so much difference. Once a student has forgotten so much that the learned associations have vanished, a considerable portion of the material is irretrievably lost.

Notetaking and study skills should be a part of business communications. Business teachers should persistently demonstrate and immediately review methods to improve students' abilities to retain information.

Summary

Spacing effect research has been conducted for over a century, and few know anything about it. This paper reports the results from five of the earliest researchers: Ebbinghaus, Starch, Pyle, Perkins, and Lyon. From these studies teaching recom-mendations can be made. For example, spaced instruction for short periods over several days improves students' retention. Warming up at the beginning of classes mentally prepares students and alerts their long-term memory processes. Learning activities should last between 20 to 30 minutes and then a new activity should be introduced. Finally, as memory starts to fade, recall and review can economically keep material in memory.

These are proven and robust teaching techniques that impact student learning. These teaching techniques can enhance students' retention abilities in business courses. If applied skillfully and carefully, teachers can enhance their students' results.

References

Dempster, F. N. (1988). The Spacing Effect--A case study in the failure to apply the results of psychological research. American Psychologist, 43(8), 627-633.

Ebbinghaus, H. (1913). Memory (H.A. Ruger & C.E. Bussenius, Trans.). New York: Teachers College. (Original work published 1885; paperback ed., New York: Dover, 1964).

Glover, J. A., & Corkill, A. J. (1987). Influence of paraphrased repetitions on the spacing effect. Journal of Educational Psychology, 79, 198-199.

LaBonty, D. J., & Bartholome, L., W. (1994) Maximize learning time. Business Education Forum, 48(4), 17-22.

LaBonty, D. J. (1995). A comparison of teaching dBASE software concepts using spaced instruction and massed instruction. In Information Systems and Global Competitiveness, 1995 Refereed Proceedings; International Association for Computer Information Systems, 447-454.

Lyon, D. O. (1914). The relation of length of material to time taken for learning and the optimum distribution of time. Journal of Educational Psychology, 5, 1-9, 85-91, 155-163.

Melton, A. W. (1970). The situation with respect to the spacing of repetitions and memory. Journal of Verbal Learning and Verbal Behavior, 9, 596-606.

Perkins, N. L. (1914). The value of distributed repetitions in rote learning. British Journal of Psychology, 7, 253-261.

Pyle, W. H. (1913). Economical Learning. Journal of Educational Psychology, 3, 148-158.

Rea, C. P. & Modigliani, V. (1985). The effect of expanded versus massed practice on the retention of multiplication facts and spelling lists. Human Learning, 4, 11-18.

Starch, D. (1912). Periods of work in learning. Journal of Educational Psychology, 3, 209-213.

Underwood, B. J. (1970). A breakdown of the total-time law in free-recall learning. Journal of Verbal Learning and Verbal Behavior, 9, 573-580.

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INCORPORATING INDUSTRY-BASED SKILL STANDARDS INTO HIGH SCHOOL SECRETARIAL AND ADMINISTRATIVE/INFORMATION SERVICES PROGRAMS: TEACHER PROFESSIONAL DEVELOPMENT ACTIVITIES

Phyllis C. Bunn

Abstract

The AEA developed national industry-based skill standards in secretarial and administrative/ information support services. Incorporation of these standards into high school business programs will help business educators develop appropriate curriculum and programs; understand work-readiness skills that high school graduates need for employment; join forces with industry to speak a common language about educational needs; strengthen their relationship with local businesses; and provide students with better career advice. This study provides evidence that professional development activities are needed to make teaching more relevant to industry-based skill standards developed by business and industry.

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Over the past fifteen years, the competitiveness of the U.S. economy has been challenged. This challenge has moved business and education leaders in the United States to acknowledge the interdependence between education and the economy, including workforce preparation. A major outcome of this economic challenge has been the development and implementation of occupational standards, including certification of skills and standards (Warnat, 1992). The SCANS (Secretaries Commission on Achieving Necessary Skills, 1991) report defined skills needed for employment. Building on the report, business and industry, education, and government leaders have recognized the need to provide worker preparation that addresses current and anticipated occupational workforce needs. Under the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (U.S. Congress, 1990), matching grant funds have been mandated for implementing voluntary, industry-based skill standards. These matching grants have implications for greater accountability in business and other vocational education programs. Skill standards are also integrally related to the Goals 2000: Educate America Act (U.S. Congress, 1994) which incorporates policy requirements for ensuring the success of voluntary industry-based skill standards.

Labor Secretary Robert Reich argues that skill standards can aid communication among employers, educators, trainers, and workers regarding specific skill level and needs. He said, "There is a disconnect between the skills people have and the skills the economy requires" (U.S. Department of Labor, 1993). Skill standards identify the knowledge, skill, and level of ability an individual needs to perform successfully in the workplace. They ensure a common, standardized system for classifying and describing the skills needed for particular occupations and the skills possessed by individual workers (U.S. Department of Labor, 1993).

Twenty-two national trade associations and other organizations have received matching grants from the U.S. Departments of Labor and Education to develop and implement national voluntary skill standards and certification in selected trades or industries. The American Electronics Association (AEA, 1994) accepted matching funds and has developed skill standards in three areas for the electronics industry. AEA posits that "skill standards provide concrete examples of the skills needed in today's workplace and give employers, workers, educators, and trainers a common language so they can communicate better with each other. Standards can help educators know how and what to teach and give noncollege bound young people realistic, but challenging goals to work toward. AEA developed skill standards for three occupational areas--manufacturing specialist, pre/post sales, and administrative/information services support. The occupational areas selected included jobs that do not typically require a baccalaureate degree. AEA went to a broad cross section of AEA member companies and used the DACUM process of focus groups of workers and supervisors to develop the standards. Next the draft standards were validated by key stakeholders across the country, including managers, educators, trainers, government officials, and other workers. Lastly, the standards were fine-tuned (AEA, 1994).

Secretarial and administrative/information support services skill standards were one of the occupational clusters developed by AEA. They sought to determine what kinds of skills these workers need to be the best at their jobs. Their key purpose was to provide administrative and organizational assistance to internal and external customers. AEA (1994) posits that

> these workers provide administrative support to a variety of people, including cross-functional groups and individuals. They generally use a variety of office technology and computer-based applications and are often called upon to

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> be in-house experts on adapting such technology applications to the varied needs of their internal/external customers. They also support and help facilitate accurate communication and information exchange to the right customers at the right times. (p. 23)

AEA identified the underlying knowledge, skills, and understanding needed to achieve these skills. They also specified the following six critical functions as important for secretarial and administrative/information support service workers: (a) identify customer needs and plan work activities; (b) manage schedules, activities, and events to achieve objectives; (c) manage resources; (d) develop, implement, and evaluate work processes and procedures; (e) generate and maintain documents and information; and (f) initiate and facilitate communication.

Workplace development of national industry-based office occupation skill standards and certification by AEA and other trade associations and organizations requires that business educators provide future-oriented learning experiences for students within the school curriculum. Professional development is the mechanism for providing these future-oriented learning experiences. Professional development in business and other vocational education programs is a commitment designed to impact the greatest number of staff members who have responsibility for planning and implementing curriculum and programs (Illinois State Board of Education, 1991). Hoerner (1991) posits that since approximately 75% of the educators today will still be in education at the turn of the century, the major method to change will be through inservice professional development.

Professional development is essential to the success of business education programs, and commitment to professional development should be a precondition to the implementation of

all business education programs. Business educators must keep up to date of the changes that are taking place in the workplace and education. As a key element in the success of any new educational initiative, effective professional development assists teachers to move from what is to what should be and involves a change process that includes learning new ways of thinking and doing (Illinois State Board of Education, 1991). The Council of Chief School Officers (1992) stated in *Connecting School and Employment* that "staff development in our schools and our places of employment must become a greatly expanded investment if change is to be realized. Education and labor interests necessitate formulating policies and making a commitment to support staff training at the federal, state, and local levels" (p. 12).

Objective

Other associations are also beginning to accept Perkins matching grants to develop skill standards in the secretarial and administrative/information support service area. Input from business teachers is important so that the currently separate business and education systems become integrated and communication between business and education is facilitated. The need for teacher input in industry-based skill standard development guided this study. It was sought to determine whether and to what extent business teachers incorporate the AEA or similar skill standards into their curricula. Input was also sought to determine how business teachers are trained and/or retrained to keep up to date with current national office occupation skills used by business and industry.

Methodology

To determine use of AEA skill standards by secondary business teachers, a questionnaire was developed and sent to all high school business department chairs in Virginia. High school business department chairs are in a position to be aware

of curriculum trends and changes occurring in Virginia high schools. They were asked whether or not each AEA competency and skill standard for the secretarial and administrative/information support area was a part of the business curriculum in the schools where they serve as business department chairs. If the skill standard was a part of the curriculum, the chair was asked to rate on a four point Likert scale: (1) how important the skill standard was in the business program and (2) the amount of emphasis currently given to the standard. In addition, they were asked to describe professional development activities of business teachers in their school related to the development of AEA competencies and skill standards curriculum. Following analysis of the questionnaires, telephone interviews were conducted with a random sample of Virginia business education local supervisors to obtain additional indications of professional development activities for Virginia secondary business education teachers.

Results

Results of this study provided evidence of the extent to which Virginia secondary business teachers use AEA or similar skill standards to help students see the relationship between what they study and learn in the secondary business curriculum and its application to real-world contexts. As interpreted by the Virginia business department chairs (see Table 1), 91.4% of the programs included "Initiate and Facilitate Communication--Create and Maintain Effective and Productive Work Relations." They also reported that this AEA skill standard was of most importance, mean of 3.71 on a scale of 1 to 4, in their high school business programs. The Virginia business department chairs placed least importance on "Manage Schedules, Activities, and Events to Achieve Objectives--Plan and Coordinate Travel Arrangements" with it having a mean of 2.61 and being included in only 57% of their programs.

Table 1: Importance and Emphasis of American Electronics Association Competencies for Secretarial and Administrative/Information Support Services as Reported by Virginia Secondary School Business Department Chairs

	Importance		Emphasis	
	Mean*	SD	Mean	SD
Identify customer needs and plan work activities				
Identify customer needs	3.09	1.10	2.00	1.47
Plan strategy to accomplish work	3.35	1.04	2.69	1.35
Manage schedules, activities, and events to achieve objectives				
Produce and manage schedules	2.96	1.00	1.97	1.41
Schedule and monitor workload	2.95	1.00	2.09	1.47
Arrange, coordinate, and support meetings, events, and activities	2.76	.97	1.68	1.40
Plan and coordinate travel arrangements	2.61	.93	1.70	1.28
Manage resources				
Obtain, operate, and maintain office systems	3.24	1.03	2.65	1.48
Maintain material resources	2.98	1.00	2.25	1.43
Track financial resources	2.68	1.06	1.62	1.44
Contribute to management of work group resources	3.12	1.03	2.29	1.54
Develop, implement, and evaluate work processes and procedures				
Design and develop	2.75	1.02	1.87	1.53
Coordinate and implement	2.76	1.06	1.95	1.54
Monitor, analyze, and evaluate	2.80	1.10	2.03	1.65
Generate and maintain documents and information				
Gather data	3.20	.84	2.71	1.29
Draft, review, and finalize	3.56	.77	3.35	1.09
Duplicate and distribute	3.20	.96	2.69	1.38
Initiate and facilitate communication				
Receive and transmit information using telephone and electronic communication	3.40	.99	2.34	1.43
Create and maintain effective and productive work relationships	3.71	.73	3.29	1.10
Provide support and service	3.26	1.03	2.58	1.37

*Rated on a scale of 1 to 4 with 4 indicating a great deal of importance

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The business department chairs indicated that Virginia high school business programs gave the most emphasis to "Generate and Maintain Documents and Information--Draft, Review, and Finalize Documents." They reported that 93.5% of Virginia high school business programs include this competency. It had a mean value of 3.35, with ratings assigned on a scale of 1 to 4. The competency given the least emphasis was "Manage Resources--Track Financial Resources" which was included in only 48.4 percent of the high school business programs.

The findings of this study furnish examples of professional development activities business teachers engage in to obtain knowledge and skills for effectively teaching AEA competencies for secretarial and administrative/information support services. Professional development activities reported included workshops on practical applications of computer software and hardware, problem solving and thinking skills, technical writing, communication and customer needs, telecommunications including the internet, curriculum restructuring and development, classroom networking, and cooperative learning. One business education local supervisor reported that the tech prep and school-to-work initiatives have fostered better sharing of teaching strategies among business teachers and school districts. Another reported the importance of having representative business teachers attend large state, regional, and national conferences, especially the hands-on activities that take place as presessions. Upon return from workshops and conferences, information and handouts are shared with the rest of the faculty in the school district at inservice meetings. Conferences also serve as excellent assessment tools to evaluate programs because teachers can affirm whether or not they are teaching knowledge and skills needed by entry office occupational workers.

While a variety of professional development activities were reported at the state, district, and school levels, Virginia

business department chairs also reported deficiencies in professional development of their teachers. Needed are more hands-on activities especially in learning new software, input from local industries and businesses to make teaching relevant, and opportunities for teachers to obtain office work experience and engage in field studies and summer internships in office environments. While professional development activities are available, they are not accessible to all business teachers and require considerable personal sacrifice.

Conclusions

One conclusion of the study was that although business programs in Virginia include AEA or similar skill standards, the programs could be strengthened through better incorporation of some of AEA and similar skill standards. Standards which should receive more emphasis include "Manage Resources--Track Financial Resources;" "Manage Schedules, Activities, and Events to Achieve Objectives--Arrange, Coordinate, and Support Meetings;" and "Manage Schedules, Activities, and Events to Achieve Objectives--Plan and Coordinate Travel Arrangements." Further, high school business programs need to give more importance to the following critical functions of administrative/ information systems support occupations: (a) "Manage Schedules, Activities, and Events to Achieve Objective--Plan and Coordinate Travel Arrangements;" (b) Manage Resources--Track Financial Resources;" and (c) "Develop, Implement, and Evaluate Work Processes and Procedures--Design and Develop." Emphasizing and placing importance on these standards will help students gain the skills needed to meet business and industry entry-level requirements. Entry-level workers would be better prepared to succeed in secretarial and administrative/information support occupations. Incorporation and assessment of these skills would set the stage to certify skills that can transfer from one type of employment to another. These procedures would help students

communicate more effectively to future employers what they know and can do that matches the job requirements.

Incorporation of these skill standards will help business educators to develop appropriate curriculum and programs; to understand work-readiness skills that high school graduates need for employment; to join forces with industry to speak a common language about educational needs; to strengthen their relationship with local businesses; and to provide students with better career advice. Placing importance and emphasis on industry-based skill standards will also enable business educators to market their programs more effectively because they will be able to assure that their students meet standards. Business teachers will also be better able to communicate with students and parents about how education meets employer needs.

References

American Electronics Association. (1994). Setting the standard: A handbook on skill standards for the high-tech industry. Santa Clara, CA: Author.

Council of Chief State School Officers. (1992). Connecting school and employment. Washington, DC: Author.

Hoerner, J. L. (1991, Fall). Tech prep and educational reform. Occupational Educational Forum, 20(1).

Illinois State Board of Education, Adult and Vocational and Technical Education Division. (1991). Illinois tech prep planning strategies. Springfield, IL: Author.

Secretaries Commission on Achieving Necessary Skills, (1991). What work requires of schools. Washington, DC: U.S. Department of Labor.

U.S. Department of Labor, Office of Information. (1993, July). Labor secretary Reich supports national, voluntary skill standards system. Vocational Training News. Washington, DC: Author.

U.S. Congress. (1990). The Carl D. Perkins vocational and applied technology education act of 1990. (Public Law 101-392). Washington, DC: U.S. Printing Office.

U.S. Congress, (1994). Goals 2000: Educate America Act (Public Law (H.R. 1804). Washington, DC: U. S. Printing Office.

Warnat, W. I. (1992, October). Assessment, certification, and recognition of occupational skills and competencies: The United States experience. Unpublished manuscript. Washington, DC: U.S. Department of Education.

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